



U.S. Department of Energy  
**Office of River Protection**

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0059841

JUL 11 2003

03-ED-102

Mr. Michael A. Wilson, Program Manager  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
1315 W. Fourth Avenue  
Kennewick, Washington 99336

**RECEIVED**  
JUL 15 2003  
**EDMC**

Dear Mr. Wilson:

SUBMITTAL OF PERMIT DESIGN PACKAGE HIGH-LEVEL WASTE (HLW) -002,  
REVISION 0

Reference: WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Chapter 10, and Attachment 51, 'Waste Treatment and Immobilization Plant'."

This letter transmits Permit Design Package HLW-002, Revision 0, "Melter Offgas Treatment Process (HOP) Submerged Bed Scrubber (SBS) Condensate Receiver Vessel (HOP-VSL-00903) for HLW Facility Elevation -21 ft.," for the State of Washington Department of Ecology (Ecology) review and approval. A description of the permit design package is provided in the attachment along with the permit design package and signed certification statements. Ecology approval of this permit design package is requested by November 2003 to support construction activities on the HLW Vitrification Facility.

The attached HLW waste vitrification facility permit design package provides the information necessary for Ecology to confirm that the structures, equipment, and processes described in the permit design package will comply with the above reference. This information will allow Ecology to permit the installation of the HOP SBS Condensate Receiver Vessel (HOP-VSL-00903) in the HLW Facility Elevation -21 ft.

Due to the potential sensitivity of the attached engineering information, Ecology is requested to place the data for public review in the standard information repositories, but not provide electronic dissemination of the information.

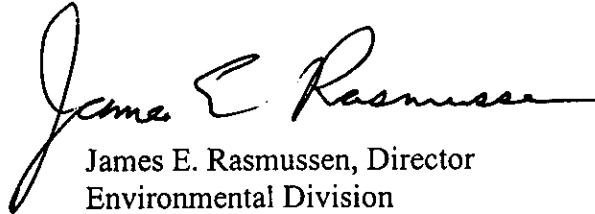
Mr. Michael A. Wilson  
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If you have any questions, please contact Lori A. Huffman, Environmental Division,  
(509) 376-0104.

Sincerely,



James E. Rasmussen, Director  
Environmental Division

ED:LAH

Attachment

cc w/attach:

B. G. Erlandson, BNI  
J. P. Henschel, BNI  
J. Cox, CTUIR  
S. L. Dahl, Ecology  
J. Grantham, Ecology  
S. J. Skurla, Ecology  
S. A. Thompson, FHI  
J. L. Hanson, INNOV  
P. Sobotta, NPT  
J. B. Hebdon, RL (w/o attach)  
A. C. McKarns, RL  
R. Jim, YN  
Administrative Record  
Environmental Portal, LMSI

Attachment  
03-ED-102

Permit Design Package HLW-002, Revision 0

## **Permit Design Package Description**

**Permit Design Package High-Level Waste (HLW) -002, Revision 0, Melter Offgas Treatment Process (HOP) Submerged Bed Scrubber (SBS) Condensate Receiver Vessel (HOP-VSL-00903) for HLW Facility Elevation -21 ft.**

Permit design package HLW-002 addresses the SBS Condensate Receiver Vessel that will be located on the -21 ft. elevation of the HLW Vitrification Facility. This package includes information for incorporation into the permit and information for incorporation into the Administrative Record.

The SBS Condensate Receiver Vessel is designed to collect condensate and wash solutions generated by the SBS, High Efficiency Mist Eliminators, and Wet Electrostatic Precipitators located on the upper elevations. This permit design package contains permit design information for the SBS Condensate Receiver Vessel for Melter 1. The design of the SBS Condensate Receiver Vessel (HOP-VSL-00904) for Melter 2 is identical to that of HOP-VSL-00903. Permit Design Package HLW-002 will be revised in the future to include engineering documents relative to HOP-VSL-00904.

Permit Design Package HLW-002 includes:

- An assessment report signed by an Independent Qualified Registered Professional Engineer certifying certain portions of the permit design package;
- Process flow diagrams and piping and instrument diagrams for the vessel;
- A mechanical assembly drawing depicting HOP-VSL-00903;
- A mechanical systems data sheet for the vessel;
- An evaluation of the type of material used to construct the vessel; and
- A system description for this vessel.

The following components of this package have been provided with other permit design packages, as listed in the Table of Contents:

- General Arrangement plans and sections;
- Engineering specifications for the design and fabrication, seismic criteria, material identification, and fatigue analysis of the vessel;
- A description of the secondary containment system design;
- A description of how the vessel will be installed;
- A description of how hydrogen gas accumulation will be controlled;
- A description of the methods used to prevent toxic emissions from the vessel; and
- Material and energy balance documents.